UNITED
NATIONS

A

General Assembly

Distr.
GENERAL

A/CONF.151/PC/43
4 July 1991

Original: ENGLISH

PREPARATORY COMMITTEE FOR THE UNITED NATIONS
CONFERENCE ON ENVIRONMENT AND DEVELOPMENT
Third session
Geneva, 12 August - 4 September 1991
Plenary Session
Item 2 C of the provisional agenda

CROSS-SECTORAL ISSUES

Human Settlements

Report of the Secretary-General of the Conference

INTRODUCTION

1. By its decision 1/28 of 31 August 1990, the Preparatory Committee for the United Nations Conference on Environment and Development (UNCED) invited the United Nations Commission on Human Settlements to pay special attention to the agenda and mandate of the Conference, with particular reference to the living and working environment of the poor in urban slums and rural areas, in order to make a substantive contribution to the preparatory process of the Conference.

2. In response, the Commission on Human Settlements, at its thirteenth session, held in Harare, Zimbabwe, from 29 April to 8 May 1991, endorsed a report entitled "People, Settlements, Environment and Development". This report, which had previously been adopted at an intergovernmental meeting held at the Hague in November 1990, sets out the role of human settlements in the context of sustainable development. The Commission also adopted a theme paper

GE.91-61683/3458B

under the title "The Significance of Human Settlements and the Global Strategy for Shelter to the Year 2000 for the Concept of Sustainable Development, with particular emphasis on the relationship between economic development, improving the living conditions of the poor and the planning and management of settlements". Finally, the Commission adopted a resolution (13/19) which, inter alia, stressed the critical role and contribution of human settlements and urbanization to environmentally sound and sustainable development; emphasized that global efforts must be made to build urban and human settlements management capacity through coordination efforts; listed a number of sustainable human settlements approaches which could contribute to the protection of the atmosphere, the protection of the quality and supply of freshwater resources, the protection of the oceans and coastal areas, the protection and management of land resources, the environmentally sound management of wastes, the improvement of the living and working environment of the poor in urban slums and rural areas, and the protection of human health conditions. The resolution recommended that the Preparatory Committee consider the question of human settlements and in the preparation of Agenda 21, give due attention to human settlements in all related issues.

3. The Commission requested the Executive Director of the Centre to transmit the Hague report and the theme paper to the Secretariat of the United Nations Conference on Environment and Development as the Commission's substantive contribution requested by the Preparatory Committee of the Conference. These documents are available to delegations.

4. The two documents mentioned above highlight the relationship between human settlements and sustainable development and illustrate how appropriate human settlements policies and programmes of action can contribute meaningfully to the attainment of the environment and development goals on the Conference agenda.

5. The present report was prepared by the UNCED Secretariat on the basis of the above contribution and in close cooperation with the United Nations Centre for Human Settlements (Habitat) and other interested agencies. Part I presents a brief overview of the human settlements situation after the 1976 United Nations Conference on Human Settlements (Habitat), with special reference to poverty, urbanization and the problems and opportunities posed by growing large urban agglomerations; and illustrates the intersectoral nature of human settlements, as well as their specific linkages with other issues of concern to the Conference. Part II contains proposals for programme action areas for "Agenda 21".

CITIES OF THE DEVELOPING WORLD ARE EXPERIENCING GREAT URBANIZATION PRESSURES ...

6. "Cities are currently absorbing two-thirds of the total population increase in the developing world. At this rate, close to 2 billion people will populate the urban areas of developing countries by the year 2000, with some 600 million of this number being added during the current decade alone. Another 2 billion people are expected to be added to the urban population of the developing countries between 2000 and 2025. Moreover, the majority of

these new urban residents will be living in large cities. Today, half of the urban population is located in some 360 cities of over half a million inhabitants each.

... AND ARE MAKING VITAL CONTRIBUTIONS TO ECONOMIC GROWTH ...

7. Cities are the main catalysts of economic growth in developing countries. Economic activities tend to concentrate in the urban centres, where today 60 per cent of gross national product is generated by about one-third of the total population.

... AND HUMAN WELL-BEING ...

8. Cities provide health, educational and social services to their own residents, but also to many more people who cannot find such services in smaller settlements and sparsely populated rural areas.

... BUT THE URBAN ENVIRONMENT IS DECAYING ...

9. For the majority of the city dwellers in the developing countries, the urban environment is worsening as a result of the inability of the city or national government to provide satisfactory services for sanitation, solid waste disposal, transport and energy for heating or cooking.

... AND THE POOR SUFFER MOST ...

10. As the physical environment in and around the growing cities deteriorates, those affected most are the urban poor, who make up 30 to 60 per cent of the urban population in developing countries and whose numbers are growing. The increased costs of health care and the productivity loss due to mortality and morbidity from gastroenteric and respiratory diseases and malnutrition are only indicators of the economic impact on the poor; we cannot adequately measure the unquantifiable costs in human suffering and lowered quality of life. For the poor, the main environmental priorities remain improved housing and the provision of basic water and sanitation services at affordable costs. Moreover, in the rapidly industrializing cities of the developing world, there is evidence that the poor are at significantly higher risk from chronic and degenerative diseases previously associated with developed countries." 1/

HUMAN SETTLEMENTS AND SUSTAINABLE DEVELOPMENT

11. Although there is a large and rapidly growing body of literature about "sustainable development policies", little consideration is given to the human settlements aspects of such policies, and such literature as there is tends to concentrate on issues related to air quality, water quality or the preservation of national landscapes. These are clearly important issues, but they are not the only aspects of human settlements which deserve consideration; in a sustainable-development context, attention has to be paid, first, to the economic and social roles of settlements. Human settlements have a central place in economic and social policy-making and in management of interactions between the built and natural environments.

12. National and subnational (regional) settlement systems are the framework within which economic activities operate, and the settlements system - cities, small centres and rural settlements and their interconnections - provides the spatial context for most capital-investment decisions. Settlements systems also have an important role in agricultural development, since it is only through the urban system and its links with rural settlements that farming can be strengthened with agricultural extension services, with production inputs, with credit support and with storage, marketing and processing facilities. Finally, settlements systems have a central place in social provision: it is through the settlements system that both rural and urban populations obtain access to health care, education, communication facilities and emergency life-saving services.

13. In essence, sustainable development means meeting the needs of the present generation without compromising the ability of future generations to meet their needs, and meeting human needs implies recognizing each person's right to a standard of living adequate for health and well-being, including adequate access to food, clothing, shelter, medical care and necessary social services (as stated by the Universal Declaration of Human Rights). This Declaration and subsequent United Nations documents have also stressed that development goals should include the right to choice and participation in representative governmental structures. In the context of sustainable development, human settlements management seeks not only the achievement of good living and working environments but also the attainment of economic, social and political goals, by making optimum use of the global natural-resource base of life-support systems. Thus, "sustainable settlements development" brings together two strands of thought about the management of human activities - one concentrating on developmental goals (including a concern that the poor receive an equitable share of the benefits of development); the other on achieving those goals without damaging the planet's life-support systems and without jeopardizing the interests of future generations.

I. BACKGROUND

A. FIFTEEN YEARS OF HUMAN SETTLEMENTS SINCE HABITAT: UNITED NATIONS CONFERENCE ON HUMAN SETTLEMENTS

14. In 1976, the United Nations convened its first major Conference on Human Settlements. The 64 recommendations for national action adopted by the Habitat Conference covered six major areas: settlement policies and strategies; settlement planning; shelter, infrastructure and services; land; public participation; and institutions and management. Under these headings, individual recommendations referred to a very broad range of issues which can be traced in the present Human Settlements Programme of the United Nations and in specific programmes launched and developed by the Centre and by its international partners in human settlements development.

15. The institutional arrangements outlined by the Conference resulted in the consolidation of various existing units and activities of the United Nations Secretariat into the United Nations Centre for Human Settlements (Habitat), to act as the focal point for human settlements within the United Nations system,

to provide secretariat services to the United Nations Commission on Human Settlements and to implement an integrated work programme which includes research, technical cooperation and information dissemination.

16. The Commission on Human Settlements, in particular, has taken the lead in developing new perspectives on human settlements issues which also have a bearing on wider development issues: among them it is worth mentioning the "enabling approach" 2/ to human settlements development and the identification of urbanization as a challenge and an opportunity for development, rather than simply the result of rural underdevelopment and uncontrolled migration; the 1987 International Year of Shelter for the Homeless and the "Global Strategy for Shelter to the Year 2000"; the Urban Management Programme, in cooperation with UNDP and the World Bank; the Sustainable Cities Programme; the definition and support of the role of women in human settlements development; and the evolution of research, training and technical cooperation efforts from a project-by-project basis to an integrated programme approach.

17. Thus, possible solutions to human settlements problems have been developed starting from the sound foundation provided by the Habitat Conference. They have taken the form of policy recommendations across the whole spectrum of human settlements, of specific research work and technical guidelines covering building materials, the construction sector, water supply and sanitation, appropriate modes of transport, environmental planning and management, energy, the assessment of training needs, and many others; and of field-testing of appropriate and replicable approaches in practically all developing countries. As a result of these activities a large number of developing countries are strengthening their human settlements institutions, promoting decentralization, and mobilizing the resources of many new actors for the improvement of the settlement conditions of relatively large numbers of their population.

18. Nevertheless, at the policy level, a number of countries still perceive human settlements, and the provision of shelter in particular, as a top-down responsibility. Decentralization policies transferring functions and responsibilities are rarely accompanied by the resources, staff and legislation enabling local authorities to expand their sources of revenue. The poor, their settlements and their informal activities are still seen as disturbing problems, rather than resources to be included as legitimate actors in the mainstream of development. More generally, expenditures for human settlements management and development are still perceived by too many policy makers as social expenditures, rather than what they are and what they can be - one of the indispensable foundations of social and economic progress, economic growth, human development and environmental improvement. To date it is estimated that less than 3 per cent of the total commitment of the multilateral programme is allocated to the shelter sector. Only in the late 1980s has the realization of the urban dimension of development taken a concrete dimension with initiatives such as the 1986 DAC/OECD meeting on Urban Development, the launching of the UNDP/World Bank/UNCHS Urban Management Programme in the same year, WHO's Healthy Cities Programme, and the World Bank's "Urban Policy and Economic Development and Agenda for the 1990s" in 1991.

19. This must also be seen against a background of escalating human settlements problems, a situation in which long term planning is overshadowed by the urgencies of crisis management; a growing gap between escalating demand and stagnant, and often decreasing public-sector capacity and resources; the short-term repercussions of structural adjustment policies; mounting debt problems; and the growing problem of poverty, seen from the combined point of view of national situations and the growing numbers of urban and rural poor in the developing world and in this connection, the "urbanization of poverty", the most recent and preoccupying phenomenon in the developing world.

B. HUMAN SETTLEMENTS CONDITIONS AND TRENDS: SOME BASIC ISSUES

Population

20. The present population of the world is estimated at around 5.3 billion. At its peak in the late sixties and early seventies, the average annual rate of increase of the world's population was close to two per cent. Projections suggest that this rate of increase will fall to less than one per cent by the second decade of the next century. However, the gradual abatement of global population growth rates varies from one region to another. In addition, diminishing rates of population increase in developing countries apply to increasingly large absolute numbers. The result is that absolute population increases in the developing world will reach their historic peak in the remaining part of the present century and initiate a slow downward trend only twenty years from now. During the present decade, the developing countries will have to plan for shelter, infrastructure and services for nearly a billion additional people, both rural and urban - not to mention the need to improve existing conditions and to overcome the enormous deficiencies of existing settlements. The urban population of the developing countries, in particular, is increasing at a rate of about 3.6 per cent per year, which means a doubling time of only 20 years. This is from combined natural increments of urban populations and rural-urban migration.

21. Many countries have successfully implemented policies to lower population growth rates; however, shelter, infrastructure and services are needed today, and policies and programmes are required to increase the capacity of nations to satisfy equally large needs in the future as well.

22. There are differences between urban and rural population growth patterns. According to a recent United Nations Study on Fertility Behaviour in the Context of Development, based on the United Nations World Fertility Survey, urban/rural fertility differentials have widened, owing to rapid declines in fertility in urban areas. Several factors account for this phenomenon: women in urban areas desire smaller families, marry later and use contraception more often and possibly more efficiently.

23. Experts have also theorized on the magnitude of rural/urban differences in fertility changes in the course of the demographic transition. It is thought that at the initial stage, urban/rural differences are small. Gradually couples develop preferences for smaller families, and the use of various methods of fertility control spread among the urban population. Then, at the last stage of the transition, urban attitudes and values concerning fertility and fertility-related behavior spread to rural areas: rural

fertility then falls, and, ultimately, rural and urban fertility levels converge and stabilize around low levels. Thus, urbanization has a far-reaching effect on the reduction of natural population growth rates not only in urban areas but also in rural areas. Paradoxically, urbanization might be the most powerful long-term factor of spontaneous decrease in overall rates of population growth.

Urbanization

World Urbanization Trends

24. "Global urbanization will continue. While almost half of the world's population is already urban, by the first quarter of the next century the majority of the world's inhabitants - over 5 billion people - will live in urban settlements. A growing share of the world's poor will live in rapidly growing urban agglomerations." 3/

25. Urbanization - the process by which population settles within areas classified as urban - shows different trends in the industrialized and in the developing countries. In industrialized countries, high levels of urbanization were reached by the middle of the present century, and urban population has now practically stabilized. In 1950, more than half of the industrialized countries' population already lived in cities, and this percentage has grown steadily - from 60.5 per cent in 1960 to 72.7 per cent at present. By the year 2025, almost eight out of ten residents of industrialized countries will live in cities and towns.

26. Urbanization processes have been much more rapid in developing countries. In 1950, the percentage of the total population living in urban areas was only 16.9 per cent. It grew very rapidly to 25.5 per cent in 1970 and 33.9 per cent at present. In less than 20 years from now, nearly half of the population of developing countries will live in urban areas (see table).

Urban population in industrialized and developing countries 4/

1950-2025 (millions)

Year	Developed Countries		Developing Countries	
	Urban	% of total population	Urban	% of total population
1950	448	53.8	285	16.9
1960	571	60.5	459	22.1
1970	699	66.6	675	25.5
1980	798	70.2	972	29.3
1990	876	72.7	1 385	33.9
2000	945	74.8	1 972	39.5
2010	1 003	76.8	2 733	46.5
2020	1 050	78.4	3 599	53.5
2025	1 068	79.0	4 051	56.9

27. In industrialized countries, rural populations are steadily decreasing. In the developing countries, on the other hand, population is increasing in both urban and rural areas, although at a much lower rate in the second group. Rural areas will continue to be a substantial source of urban growth, supplementing a continuing increase from higher than replacement rates of fertility.

28. Rural-urban migration poses dramatic additional demands on the capacity of cities to provide land, shelter, infrastructure, services and employment; but at the same time, it relieves the demand for exactly the same needs on the part of out migrants who leave rural areas overtaxed beyond their carrying capacity. Natural population growth, which is highest in rural areas, can only take three directions: in the absence of migration, the concentration of population on existing and already fully exploited agricultural lands, or the opening up of new lands for agriculture, often with decreasing returns on investment; in the case of rural-rural migration, the colonization of the rural frontier, which happens, as a rule, in ecologically fragile regions, with devastating consequences for the environment and for the settlers themselves (deforestation, destruction of natural habitats, decreasing productive returns on over-exploited and often inadequate land); or migration to existing urban settlements.

29. It may be stated that, from an environmental point of view, migration to urban settlements is the most desirable option. While the high density of human activity which is characteristic of cities leads to special environmental problems, such as congestion and pollution, it is also true that cities are better places than remote and unplanned rural areas to mitigate and control the environmental effects of their development. Citizens have much more leverage than isolated rural dwellers to exert pressure on government, local authorities and industry to protect their own health and to limit the impact of activities that are damaging to the environment.

30. Urban growth, with its high densities, may also lead to a more efficient use of limited land areas. Each productive activity has certain needs for land, but modern technology can provide solutions to land-efficient development for both the urban and rural sector. In urban settlements, for example, appropriate land-use policies based on efficient densities and development patterns can reduce the amount of land needed for settlement development, and at the same time minimize the need for transportation, with consequent beneficial effect in terms of resource consumption, environmental protection and amenities for residents.

31. Finally, urbanization provides a partial answer to the needs, preferences and aspirations of people. The cities of the developing world are providing an immensely resourceful safety net for millions of dispossessed and jobless rural migrants, as well as for their own settled and growing populations. Cities also act as hosts to the needs of non-urban residents: it is often common for millions of rural dwellers to use higher-level urban services (special health care, for example) for emergency needs that cannot be satisfied in isolated and poorly equipped rural locations.

32. These considerations have led in recent years to a more constructive approach towards urbanization issues. This approach can be best summarized in

the following statement from the UNDP 1990 Human Development Report: "Rapid urbanization is neither a crisis nor a tragedy. It is a challenge for the future. The process of urbanization has created a host of new opportunities intermeshed with new and ill-understood problems ... The focus on today's cities must move decidedly towards better management, with past failures giving way to more appropriate policies and practices".

Megacities

33. Trends in the distribution of the world's urban population by size-classes of cities are very significant. Present global estimates and projections show a gradual redistribution of urban population in the 1,000,000+ city-size range. In 1960, more than one-third of the world's city dwellers lived in cities below 100,000 people, more than one-third of the world's urban population already lived in cities with above 1 million population. By the year 2000, almost half of the total urban population of the world will live in urban agglomerations of one million inhabitants or more. Their number (1.3 billion people) will be greater than the total urban population of the planet 40 years before. It is estimated that by the year 2000, 18 of the 24 world cities of over 10 million inhabitants will be in the developing countries.

34. While some of the megacities in the industrialized world are showing trends of population stabilization or decrease, the largest urban agglomerations located in developing countries will continue to grow. Decentralization policies can have their effects felt only if sustained over prolonged periods of time, and only as a result of massive investments capable of creating real alternatives to the agglomeration economies present in the largest cities. Therefore, the unavoidable option is to prepare for this future scenario and to take anticipatory action in view of the many crises which have already impacted severely on the quality of life and management prospects of many of these large cities, particularly in the areas of water supply, water quality, and environmental pollution.

35. In spite of the problems megacities face there is no clear, substantiated evidence to suggest an automatic correlation between city size, quality of life and environmental degradation. The most recent global survey on this subject is "Cities: Life in the World's Largest Metropolitan Areas", conducted by the Washington-based Population Crisis Committee. The survey was based on 10 indicators: public safety; food costs; living space; housing standards; communications; education; public health; peace and quiet; traffic flow; and clean air. The combined indicator based on these data shows no correlation between quality of life and city size. In India, for example, Calcutta, with a population of almost 13 million, ranks low on the global scale, but also shows a marginally better record than that of Kanpur (population, 2.3 million). Shanghai (population: over 9 million) shows a better overall ranking than Harbin and Nanjin, two other cities of China below three million in size. In Latin America, the combined indicator for the fourth largest urban agglomeration in the world, Sao Paulo (population: 17.2 million) is slightly worse than that of Belo Horizonte but considerably better than that of Recife, another Brazilian city less than one-sixth its size.

36. Similarly, while the air pollution situation, crippling traffic and water problems of some cities are well-known cases, smaller cities may present such liabilities as lack of employment and access to land and essential infrastructure which fuel migration to megacities.

37. Developing countries should therefore adopt urbanization policies based on efficient management of all cities, large and small. The aim should be to take maximum advantage of irreversible and powerful urbanization development trends and to strengthen urban settlements that can act both as centres of production and growth for national and subnational economies, as well as efficient recipients of rural-urban migratory flows. At the same time, the strengthening of intermediate cities which can act as magnets for migration flows may take some pressure off the megacities. The role of secondary cities and intermediate settlements, as suggested by the report of the World Commission on Environment and Development, must be given full consideration.

38. Despite the increasing process of urbanization the majority of the developing country population still lives in rural areas, relying heavily on agriculture for their livelihood. To the extent efficient agriculture can be encouraged by appropriate policies and infrastructure, people will remain in the countryside, taking pressure off the cities. Efficient agriculture, which involves rural/urban trade of inputs and outputs, also gives rise to urban job creation. Thus, one aspect of an overall urban strategy should be measures to support more efficient agricultural development.

Poverty

39. "The intolerable and worsening living and working environments of the poor in urban slums and rural areas, with their implications in terms of human suffering, deteriorating health and reduced life expectancy, are a major determinant of poverty. Therefore, the improvement of the living and working environment of the poor is a priority concern". 5/

40. Estimates of world poverty vary according to different methods of calculation. One of the most recent assessments (World Bank Development Report 1990) gives a global figure of one billion people below the poverty line. According to estimates in the 1989 Report on the World Social Situation, the percentage of the world's population living in absolute poverty has decreased between 1970 and 1985 (from 52 to 44 per cent), but the absolute numbers of the poor are increasing in all developing regions: during the 1970-1985 period they increased by 22 per cent. What is particularly striking is the increase of urban poverty. While the percentage increase of the world's rural poor is estimated at 11 per cent, the percentage increase of the urban poor has been 73 per cent over the same 15-year period. Peaks are found in Latin America, where the urban poor have more than doubled, and in Africa, where the increase was as high as 81 per cent.

41. In many countries of the developing world, poverty has become a predominantly urban problem. Thus, increasing numbers of people have to try and satisfy basic needs for shelter, infrastructure and services in urban environments, where access to the requisites for settlement - employment, land, building materials, mobility - are much more difficult to satisfy than in most rural contexts.

42. Most of the urban and rural poor have no access to safe drinking water, elementary sanitation and primary health-care services. A high proportion of the urban and rural poor are disabled by household or workplace accidents. Informal urban settlements are often located in hazardous, flood-prone and unhealthy sites, where overcrowding is compounded by exposure to communicable disease and garbage dumps constitute a permanent health hazard.

43. The low-income majorities in the developing world, however, are not "poor" in terms of skill, ingenuity, social identity, traditions, culture or personal dignity (and other attributes of human "richness"); they are poor in the sense that, in the context of rapidly-evolving societies, based on monetary values and on the exchange of material goods, they cannot afford access to a dignified and healthy livelihood. Adequate shelter is one basic need which they cannot meet. In the absence of an adequate and steady source of income, the only ways to gain access to decent shelter in an urbanized context are the provision of shelter by government (a policy which has often proven inefficient and cannot address the problem at the scale required), an efficient system of subsidies, whereby the gap between disposable income and the market price of decent housing can be reduced or the facilitation of self-help and/or "informal" solutions to shelter needs.

44. The first two options or a combination of the two have found application in some industrialized societies, where some of the shelter needs of poor urban minorities could be addressed by sizeable public-housing programmes and adequate subsidies. In most developing countries, the situation is exactly the opposite: welfare programmes are virtually non-existent, and public housing programmes are targeted to limited numbers of recipients, whereas the poor constitute, as we have seen in many cases, the bulk of the urban population.

45. In such situations, the urban poor are left with the residual option of finding shelter with their own means. This happens in a variety of ways: temporary accommodation with friends and distant or close relatives; rental accommodation provided by the informal sector. For many others the only option is to build, individually or on a communal basis temporary shelter on derelict or vacant sites.

46. It is necessary for governments to understand and acknowledge this state of affairs and to facilitate the recognition of this option as a legitimate settlement process. Examples of appropriate and feasible approaches abound: they all relate to the legitimization of the urban poor's efforts in providing themselves with adequate housing. Among them are the granting of security of tenure, the simplification of existing codes and regulations, the acceptance of indigenous and low-cost building materials, the regularization of informal settlements which are not permanently exposed to contamination, flooding or landslides, the provision of basic infrastructure with the participation and financial contribution of residents and the promotion of other forms of access to low-cost shelter, such as rental housing. All of these measures can greatly improve the living conditions of the urban poor and, at the same time, contribute to environmental improvement in urban areas.

47. Serious problems also exist in the developed countries. For instance, in many countries the number of homeless people has been growing rapidly in

recent years. In others, there is a significant proportion of people suffering severe deprivation. Many such people (especially the uneducated, poor and elderly) are trapped in declining industrial cities or decaying city districts, as the young well-educated or rich move out. Others still also have serious problems, resulting from the decline of large industrial centres. Slow economic growth and serious housing shortages affect much of the urban population, and, recently, there have been economic and political uncertainties, rising unemployment and cutbacks in social-security provision.

C. LINKAGES BETWEEN HUMAN SETTLEMENTS AND ISSUES OF ENVIRONMENT AND DEVELOPMENT

Land

48. In the developing countries, competition for finite amounts of land suited for agriculture, coupled with the introduction of capital-intensive agriculture, makes it increasingly difficult for growing numbers of rural dwellers to sustain their livelihood base. Many of them move to ecologically fragile lands on the agricultural frontier, where prospects for sustainable agriculture are even more precarious and settlement conditions are exceptionally harsh because of the remoteness from urban centres and lack of infrastructure and services.

49. In urban areas, land is also competed for by various uses and users: industry, services, commerce, transport infrastructure, and housing. However, appropriate criteria for settlement planning and development can make land use more efficient. New urban expansion areas, for example, can be planned according to suitable densities, without sacrificing space and public amenity and at the same time allowing for more cost-efficient infrastructure and transport systems. An important contribution to sustainable human-settlements approaches to the land issue can come from improving the access of the poor to suitable land in urban areas. Expanding access to participation in the land market by removing the legal and regulatory bottlenecks that presently conspire to exclude low-income groups from the market should become a priority objective for municipal authorities, together with parallel efforts for the advance planning of suitable sites for informal-sector and self-help development and the regularization of existing low-income settlements suitable for consolidation.

Deforestation

50. Uncontrolled deforestation processes are the result of a number of causes: among them are commercial exploitation and pressure for new land, usually for settlement and agriculture.

51. Land reform though a difficult goal in these countries must be pursued, and viable alternatives for gainful employment in the non-agricultural sector should be sought.

52. A problem which has received much attention is the destruction of soil cover and tree vegetation for fuelwood and charcoal production, which is the main source of energy for the urban and rural poor in many developing countries. It must be noted, however, that the poor resort to these means

simply because they still provide the cheapest, and often the only source of energy for heating and cooking purposes. Gathering fuelwood is a time-consuming, exhausting and often hazardous practice, which falls as a rule on women and children. Viable alternatives exist in terms of more efficient cooking stoves and of renewable sources of household energy, such as biogas. The introduction of these alternatives is simply a function of resources needed to improve their range of applicability and to disseminate their application in rural areas.

Energy and Transportation

53. Human settlements are vast consumers of energy for transport, household and industrial use and atmospheric pollution is largely due to the concentration of emissions caused by settlement-based activities. The industry and commerce sectors are estimated to absorb about 46 per cent of global commercial energy consumption, while the household and transport sectors account for the remaining 54 per cent. Thus, more efficient ways to provide for the energy needs of industry, households and for the transportation of people and foods can lead to considerable reductions in energy consumption and in atmospheric pollution.

54. There are several ways to reduce atmosphereic pollution: increase the efficiency in the use of fossil fuels; introduce and enforce appropriate standards and regulations; encourage the use of renewable resources of energy; and reduce the causes of atmospheric pollution at the source. The optimization of fossil-fuel use can be achieved through many means, and particularly in the transport sector, by encouraging energy-efficient modes of transport (e.g. public transport and rail).

55. Transportation alone accounts for approximately 50 per cent of the total global consumption of fossil fuel. Public transport is of fundamental importance to the urban and rural poor, who do not have access to suitable means of individual transport and have to travel long distances daily to reach their place of work. In urban areas, efficient public transport systems are one of the best means available to relieve traffic congestion, which is a prime cause of discomfort and air pollution.

56. Energy is an important input for building materials production and therefore an area where considerable savings can be achieved. The energy demand for the heating and cooling of buildings can also be reduced through appropriate insulation and building design and the adoption of renewable energy sources.

57. It should be noted that the abatement of atmospheric pollution is not only dictated by environmental priorities, but justified by equity considerations. It is the poor whose health suffers most from daily exposure to high levels of atmospheric pollution.

Coastal area management

58. Coastal areas are the object of intense pressure and development because of their very characteristics: the presence of harbour facilities, their locational advantages for certain industrial processes and the advantages they

offer for tourism and recreation. At the same time, they often contain precious and irreplaceable natural habitats, are permanently exposed to the risk of natural disasters such as hurricanes, cyclones and tidal floods, and are located at the interface between land-based and marine sources of pollution. Sea-level rise, which is the likely result of global climate changes now taking place, is an additional factor which must be taken into account by human settlements in coastal area.

59. Coastal area management calls for a coordinated effort among coastal municipalities so as to share the gains, as well as the costs, integrated urban development and environmental protection.

60. Other problems have to be addressed by controlling discharges of pollutants in upstream watercourses, and the best way of doing so is to provide adequate waste treatment infrastructure in inland settlements which, in turn, will improve their own environmental and health conditions.

Water supply

61. Water is indispensable for human existence, health, and all of humanity's productive activities. Human settlements are where all of these needs converge. Water is needed for drinking, washing, sanitation and a host of productive and service activities which support development and economic growth, particularly in large cities. In the developing countries, most settlements, both urban and rural, are afflicted by a chronic lack of safe water supply - a lack which is due not only to increasing costs in water provision and distribution infrastructure, but also to poor management and maintenance of existing urban and rural water systems, resulting in considerable water losses.

62. In addition, the competing needs for water in human settlements inevitably affect the weakest segments of the population. It is the urban and rural poor, and in particular women and children, who have to fetch water over long distances and who pay water vendors in informal urban settlements prices which can be up to five times higher than that of piped water supplied to higher-income neighbourhoods. This results in severe impacts on income, hygiene, nutrition and health.

63. In urban areas, the causes and effects of water-supply problems can be addressed by forward-looking urban planning and management. Charges could reflect the actual costs of water supply and maintenance with appropriate cross-subsidy systems for low-income users. The superfluous use of drinking water for gardening, street washing, car washing, and a number of household uses can be discouraged through disincentives or regulations. The regularization of informal settlements, including water supply infrastructure, can create the conditions for residents to pay water charges regularly, thus contributing to the sustainability of urban water-supply systems.

Sanitation and Wastewater Management

64. Sanitary wastes and wastewaters are hazardous to health and cause adverse impacts on the environment. Lack of sanitation in a community results in increased costs for curative medicine and reduced productivity, as well as

lowering the quality of life generally. Uncontrolled discharge of urban sewage and industrial effluents contaminate potable water supplies and make surface waters unfit for safe use. Yet wastewater can be collected, treated and used for crop irrigation, aquaculture or industry.

65. The environment has a natural capacity to assimilate waste materials, but, as the density of population increases, these limits are quickly exceeded. In rural areas, human waste disposal must be dealt with along with provision of a safe and plentiful water supply and health education, if mortality (particularly infant mortality) and morbidity levels are to be reduced. However, both health risks and potential damage to living conditions are greatest in densely populated urban areas. Adequate sanitation provision (including sewerage), wastewater-disposal systems and stormwater drainage are vital in urban centres.

66. In the developing countries, less solid waste is produced per inhabitant, but only 30 per cent is collected on average. This situation poses significant public health problems, undermining the health and the well-being of the people, decreasing their productivity and constraining the development aspirations of the potential of individuals and settlements.

67. An environmentally sound and resource-efficient approach to the problem of growing amounts of sanitary waste, wastewaters and solid waste would therefore be a crucial component of human settlements policies and programmes. An extensive description of waste and sewage management issues can be found in document A/CONF.15/PC/76: Environmentally-Sound Management of Solid Wastes and Sewage-related Issues. However, it must be noted that improvements in water supply, sanitation and waste management can best be achieved through a settlement-wide, integrated management approach dealing with the entire cycle of water and waste management.

Construction Activities

68. Construction provides the direct means for the development, expansion, improvement, maintenance and preservation of human settlements, and economic growth in general. The construction industry is, therefore, vital to the achievement of national socio-economic development goals, including human settlements development.

69. Construction, however, can also contribute to the degradation of the environment, through physical disruption, the depletion of key renewable resources, and excessive consumption of energy. The production of building materials, in particular cement, lime and bitumen can account for a significant share of air pollution. CFCs have also been used by the construction industry (e.g. air conditioners and insulation products).

70. In the developing countries, the lack of appropriate and affordable building materials is a major factor hampering development and, in particular, affecting the shelter conditions of the urban and rural poor. On the one hand, the large-scale production of building materials is inefficient, and with higher end costs to the consumer. On the other, the production and use of indigenous and appropriate building materials is often discouraged by outdated attitudes and unrealistic building codes and regulations.

Opportunities for the small-scale production of building materials are thus lost, undermining both openings for employment and access to affordable building materials on the part of the urban and rural poor.

71. The seven topics illustrated in this section are but an exemplification of the far-reaching linkages that exist between human settlements, environment and development. In order to translate concern into action, however, it is necessary to think in terms of programme areas where sustainable human settlements policies can make a positive and lasting impact.

72. These programme areas suggested as options for Agenda 21 are illustrated in the following part of this document.

II. OPTIONS FOR AGENDA 21

73. The information provided in the first part of this paper illustrates the fact that human settlements must be an important component of the overall goals of the Conference, particularly in relation to the alleviation of poverty and the improvement of the living conditions of the urban and rural poor. To the maximum extent possible, the programme action areas are cross-referenced to programme action areas contained in other Agenda-21 documents available to delegations. For additional background information on the seven programme areas listed below, delegations may wish to refer to the report "People, Settlements, Environment and Development" and the theme paper mentioned in paragraph 2 of the present document.

74. There will also be a need for a strong integration between all these programme areas. While improvements in any of them will certainly contribute to improving the quality of life of people, promoting economic growth and enhancing the prospects for environment sustainability, action in all programme areas will have to proceed, as far as possible, in a harmonious fashion. Otherwise, improvement in one area will be offset, or even nullified, by setbacks in others. Several opportunities are available to work towards this goal.

75. The first one is improved coordination between the international, national and local dimensions of development and between the sectoral responsibilities of international external support agencies.

76. The second opportunity is to base development activities on the needs, aspirations and resources of people. It is people who will ultimately decide what development and environment mean to them, and it is people who appreciate, better than any expert, the importance of development and of the preservation of the environment to their own lives and those of their children. The enabling approach to development is founded on this key principle.

77. The third opportunity is to see the key components of human settlements development - shelter, land, construction, infrastructure and services, transport, energy - as elements of an integrated function, which is human settlements management. This dimension will find its application at all levels of national development: certain management functions will be the prerogative of central governments, while others will be better performed at

the subnational level. Increasing responsibilities for human settlements management are being entrusted to metropolitan and municipal authorities, and this is why urban management is attracting so much more attention than in the past. But in the final analysis, no management function, large or small, will be performed effectively without the legitimization and participation of communities, where settlements management will be put to its ultimate test in terms of the improved well-being of all.

HUMAN SETTLEMENTS OBJECTIVE

78. The overall human settlements objective is to improve the social, economic and environmental quality of human settlements and the living and working environments of all, and particularly the urban and rural poor.

PROPOSED PROGRAMME ACTION AREAS

79. The following major human settlements-related programme action areas are proposed as options for consideration by the preparatory committee:

* ADEQUATE SHELTER FOR ALL
* HUMAN SETTLEMENTS MANAGEMENT
* LAND-RESOURCE MANAGEMENT
* ENVIRONMENTAL INFRASTRUCTURE:
  WATER, SANITATION, DRAINAGE, AND SOLID WASTE MANAGEMENT
* ENERGY AND TRANSPORT
* CONSTRUCTION
* HUMAN-RESOURCE DEVELOPMENT AND CAPACITY BUILDING
  FOR HUMAN SETTLEMENT DEVELOPMENT

A. ADEQUATE SHELTER FOR ALL

Basis for Action

80. It is estimated that at least one billion people presently do not have access to decent shelter and that if appropriate global and national action is not taken, this number will increase dramatically by the end of the present century and beyond. The 1990 International Development Strategy for the Fourth United Nations Development Decade states that "... the increase in the number of homeless people in many developing countries has been one of the serious manifestations of the deteriorating human condition, and the improvement of human settlements as agreed in the Global Strategy for Shelter to the Year 2000 should be part of the crucial effort in this field ...".

81. A major global programme to address this problem is the Global Strategy for Shelter to the Year 2000, adopted by the General Assembly of the United Nations in December 1988. Despite its widespread endorsement, the Global Strategy needs a much greater level of political commitment and a far higher degree of attention and resources to reach the goal of adequate shelter conditions for all by the end of the century. The 1992 Earth Summit can give greater impetus to ongoing international and national efforts, stimulate new initiatives and renew global commitment to the Strategy's goal of adequate shelter for all to the year 2000.

Objective

82. The fundamental objective is to facilitate adequate shelter for all by the year 2000 through an "enabling approach" to shelter development and improvement specifically geared to the needs and circumstances of the urban and rural poor.

83. At the international level, the objective for multilateral and bilateral donors is to provide the maximum level of assistance to enable all countries, and particularly the least developed countries, to reach the objective above.

Activities: Supporting national shelter strategies

84. A nationwide, strategic approach is the fundamental prerequisite for mobilizing the resources and the capacity needed to address dramatically growing shelter needs. National shelter strategies should be formulated, adopted, implemented and monitored in close partnership between all government agencies and the non-government sector, and involve the full participation of all those, including the residents of low-income communities, and women, who have until now been relegated to the receiving end of shelter-delivery processes. The definition of shelter adequacy can be based on criteria of affordability and suitability to national and local needs, resources and conditions and not dictated by pre-determined standards.

(a) Countries which have not yet done so could, in two years' time, formulate and adopt a national shelter strategy based on the principles and recommendations contained in the Global Shelter Strategy.

(b) Countries could adopt specific enabling actions at the national and local level, which will include the regularization and upgrading of informal settlements, and facilitating the efforts of low-income residents and communities in self-improvement efforts, capacity building, construction, and access to finance and low-cost building materials.

(c) Countries could further strengthen their efforts in monitoring the implementation of their national shelter strategies toward reaching the goal of adequate shelter for all by documenting and sharing their experience, using the monitoring guidelines adopted by the United Nations Commission on Human Settlements. Monitoring activities could be accompanied by the capacity to assess the performance of the shelter sector in the efficient delivery of adequate and affordable shelter for all segments of the population through appropriate shelter performance indicators.

(d) External support organizations and bilateral donors could increase their efforts in assisting countries in national shelter strategy formulation, implementation and monitoring. All developing countries should have received such support by the year 2000. This action could be greatly facilitated by the organization of annual review meetings involving all executing and external support agencies and bilateral agencies.

(e) International assistance can be increased building up on existing support activities for shelter-sector performance carried out jointly by UNCHS and the World Bank. By 1995, all developing countries could have tested such indicators.

(f) Global progress reports covering national action as well as support activities of international organizations and bilateral donors can be produced and disseminated on a biennial basis.

B. HUMAN SETTLEMENTS MANAGEMENT

Basis for Action

85. Urbanization holds great opportunities for development and environmental management, but also poses a serious challenge. Sustaining the capacity of cities to support national economic development, improving the living and health conditions of their residents, and achieving a sustainable use of the natural resources they require to perform their role.

86. Settlement management policies coordinated with national investment efforts and effective decentralization can produce viable alternatives to the excessive concentration of population and economic activities and their undesirable side-effects in the largest cities, and develop the capacity of all cities, large and small, to harmonize the economic, social and environmental components of urban development.

Objective

87. The objective is to provide urban settlements in the developing countries with the capacity to continue contributing to national economic development goals, to improve the living and health conditions of their residents, support rural development, and to manage natural resource in a sustainable way.

Activities: Strengthening human settlements management

88. With regard to intermediate settlements, the following activities could be undertaken:

(a) all countries could review national urbanization processes and policies and identify the factors which determine the growth of urban centres;

(b) countries could formulate programmes for the preparation, funding and monitoring of investments which could have a catalytic role in maximizing private sector investment and thus increase employment opportunities and alleviate poverty within small and intermediate centres and surrounding rural areas; and

(c) multilateral and bilateral external support agencies could assist interested developing countries in the above activities.

89. In the area of urban management, a comprehensive framework for action already exists with the UNDP/World Bank/UNCHS Urban Management Programme, a concerted global effort to assist developing countries in addressing

urban-management issues. Activities could include the strengthening of the Urban Management Programme's action areas (land, municipal finance, environment and infrastructure), as well as new initiatives designed to improve its overall impact, such as:

(a) the further promotion of collaboration among all the key participants in urban development and management processes;

(b) the strengthening of the programme's capacity in producing and disseminating urban management guidelines in the areas of land management, urban environmental management, infrastructure management and municipal finance and administration;

(c) efforts to increase human resource capacity and strengthening developing country institutions, inter alia, through technical cooperation;

(d) the further promotion of partnerships at the city, national, regional and global levels; and

(e) establishing, from 1992 onwards, regional panels of experts on urban management issues to support programme interventions at the country level, including country consultations and interventions to help apply policy framework and tools developed by the Urban Management Programme.

90. Special attention will have to be paid by multilateral and bilateral agencies to strengthening the environmental component of the Urban Management Programme and its operational arm, the Sustainable Cities Programme, a global technical cooperation programme to support municipal authorities world-wide in improving their environmental planning and management capacity. Activities could include:

(a) strengthening the linkages between the above programme and other ongoing programmes aimed at the improvement of health and environment condition in cities, such as the UNDP/World Bank "Metropolitan Environmental Improvement Programme", which is underway in Asia, the CIDA-sponsored "World Cities and the Environment" and WHO's "Healthy Cities Programme"; and

(b) assisting individual cities in institutionalizing a participatory approach to sustainable urban development, based on a continuous interaction and dialogue between the actors involved in urban development (public sector, private sector, and communities).

91. In the area of collection and dissemination of urban data, countries could benefit from participating in the City Data Programme, recently launched by UNCHS (Habitat) after consultations with the World Bank and a number of other international organizations and bilateral donors. Activities in the first phase (1991-1994) could include:

(a) pilot projects in developing countries, consisting of a survey of city-level data-collection practices, training workshops, and the testing of a preliminary urban data framework; and

(b) the production of a PC-application software designed to store, process and retrieve city data for local, national and international exchange and dissemination.

C. LAND-RESOURCE MANAGEMENT

Basis for Action

92. In rapidly-growing urban areas, access to land suitable for development is becoming a serious problem. This exacerbates conflicts between various uses: industry, commerce, residence, open space, mobility. Rising costs of urban land and the poor functioning of land markets make it increasingly difficult for the urban poor to gain access to affordable and properly located and serviced land. In rural areas, non-sustainable practices such as the exploitation of marginal lands and the encroachment on forests and ecologically fragile areas results, in addition to environmental degradation, in diminishing returns for impoverished and landless rural dwellers. Rural population relocation policies have often met with very high costs, environmental problems and the failure to achieve lasting improvements in the living conditions of rural people.

93. Land utilization is often at the interface of urban and rural development. This is exemplified in the case of large metropolitan areas, in coastal zones, and other areas where industrial, commercial and agricultural uses are increasingly entering in conflict with one another. This calls for an integrated approach to land-resource management, which needs to be addressed at the international, national, subnational and local levels. In this connection, reference will also have to be made to the proposals contained in document A/CONF.151/PC/42/Add.2 (Protection and Management of Land Resources: Options for Agenda 21).

Objective

94. The objective is to satisfy the land needs which are essential for human settlements development in ways that can guarantee equity and environmental sustainability.

Activities: Implementing integrated land-resource management

95. Countries could undertake a comprehensive national inventory of their land resources, classifying them according to their best-suited uses and identifying environmentally fragile lands for special protection measures, including river basins and coastal zones.

96. On the basis of the above, countries could develop national land-resource management plans to guide land-resource development and utilization. The implementation of such plans can be supported by the following actions:

(a) the creation of efficient land markets which respond to demand for land-resource managment and which meet collective development needs;

(b) the development of fiscal incentives to ensure land-resource protection;

(c) the encouragement of public-private partnerships in managing land resoures;

(d) the strengthening of community-based land-resource protection practices;

(e) the establishment of secure tenure for all land-users; and

(f) the implementation of land-use control measures.

97. Appropriate forms of land tenure for low-income urban dwellers could be encouraged, and efforts accelerated to promote access to, and increased efficiency of, urban land markets.

98. Activities at the international level could include:

(a) the promotion of global awareness, through public information and education, of the negative consequences of land-resource degradation;

(b) international protocols or agreements for minimization of resource depletion and degradation;

(c) programmes to effect sustainable management of international river basins, through international legal instruments; and

(d) global land-resource management programme to coordinate international efforts including those of FAO, UNDP, the World Bank and the Urban Management Programme of UNCHS (Habitat) and promote the transfer of applicable experience on sustainable land-management practices to and among developing countries.

D. ENVIRONMENTAL INFRASTRUCTURE: WATER, SANITATION, DRAINAGE, AND SOLID WASTE MANAGEMENT

Basis for Action

99. Human settlements make large demands on natural resources and generate a variety of by-products which affect the living, working and natural environments. The results are growing water, land and air pollution translating into direct negative impacts on health and quality of life as well as the rapid deterioration and depletion of the environmental and natural resources essential for long-term sustainable development.

100. Adequate infrastructure is crucial to, and a determining factor of, the pace at which human activities, and thus development, can proceed and be sustained without adverse impacts on the environment. Increased productivity, improved health, a reduced burden of investments in curative medicine and contributions to poverty alleviation are but some of the benefits of providing essential infrastructure and basic services.

101. Since most of these initiatives will require interventions within the human settlement context, an overall umbrella programme that coordinates and concentrates international efforts and leads to action at the national and

local levels will prove essential. In this connection, reference can be made to the programme action areas proposed in documents A/CONF.151/PC/42/Add.7 (Freshwater: Options for Agenda 21) and A/CONF.151/PC/42/Add.10 (Solid Waste: Options for Agenda 21).

Objective

102. The objective is to provide adequate environmental infrastructure facilities for all people by the year 2025. The achievement of this objective would require that all developing countries are endowed with the necessary technical, financial and human-resource capacity by the year 2000.

Activities: Implementing an integrated approach to environmental infrastructure

103. The following activities are proposed under this programme area:

(a) a Settlement Infrastructure and Environment Programme could be launched following the Conference, under the initiative of UNCHS (Habitat) and in cooperation with other interested agencies. The programme could ensure coordination between the activities of all agencies in the area of environmental infrastructure, and could include monitoring, applied research, capacity-building and transfer of appropriate technology and technical cooperation;

(b) at the national and local level, countries could adopt an integrated approach to water supply, sanitation, drainage and solid waste management based on the combined resources of the above programme; and

(c) emphasis could be placed on an integrated approach to environmental infrastructure improvement in informal settlements. By the end of 1995, pilot programmes could be established in a number of developing countries.

E. ENERGY AND TRANSPORT

Basis for Action

104. Achievement of sustainable global development implies realization of a sustainable energy future, especially in meeting transport, industrial and household demands. However, continuation of past patterns of energy-resource use without due regard for their ecological impact could lead to a resource-consumption crisis.

105. Human settlements represent a spatial organization of functions to meet human needs such as the efficient patterns of physical development and the movement of goods and people. By allowing access to employment opportunities, housing quarters and services, the transport sector meets the basic need to effect the exchange of raw materials and finished products. However, meeting the demand for transport involves high costs which bear on public spending, business expenditures and family budgets, competing for resources needed for the achievement of other developmental objectives. Expenditures on transport affect, in particular, low-income-family budgets, adding to the poverty burden.

Objective

106. The objective is to satisfy, in a sustainable way, human settlements related energy and transport needs which are essential for development.

Activities: Adopting sustainable energy and transport solutions for human settlements

107. As for other programmes, the result of several activities in the energy and atmosphere sectoral programmes which are found in document A/Conf.151/PC/42/Add.1; Atmosphere: Options for Agenda 21, will find direct application in human settlements contexts.

108. In the area of energy, countries could:

(a) develop national action programmes to promote integrated production of agricultural-waste and biomass energy outputs, and support reforestation and natural-forest regeneration, with a view to a sustained provision of biomass energy to meet the needs of poor households, in particular of women and children;

(b) promote large-scale dissemination and commercialization of mature renewable energy technologies through fiscal measures and internal and external technology-transfer mechanisms;

(c) carry out information and training programmes, directed at manufacturers and users, with the aim of introducing energy-saving techniques and energy-efficient appliances;

(d) adopt energy conservation measures, such as district heating and cooling, to help reduce energy consumption of these resources whilst maintaining the existing quality of life;

(e) develop cooperation in the related fields of energy conservation, energy pricing and taxation as well as in promotion of technology-oriented joint ventures between consumer and producer interests;

(f) international organizations could assist in preparing national energy management programmes; and

(g) developing countries could be provided access to research and development results, to increase energy-use efficiency levels in human settlements.

109. International organizations could provide assistance to developing countries, to enable them to apply, on a large scale, energy-saving and renewable-energy technologies, particularly for the use of solar, hydro, wind and biomass sources.

110. In the area of transport, countries could:

(a) devote priority attention to subnational development planning, local land-use planning and transport infrastructure planning to deconcentrate and reduce transport demand e.g., by encouraging compact rather than dispersed development patterns;

(b) adopt sustainability criteria in their urban transport plans and development programmes. High-occupancy public-transport vehicles can be given preferential treatment in traffic-management policies;

c) encourage non-motorized modes of transport, by providing safe cycleways and footways in urban centres;

(d) devote particular attention to effective traffic management, to efficient operation of public transport and to proper maintenance of transport infrastructure;

(e) establish appropriate national emission standards for new vehicles and ceilings for emissions from vehicles and introduce systematic control of emission levels by vehicles; and

(f) monitor the environmental impact of transport and carry out studies on the quantitative evaluation of this impact, with regard to various transport modes.

111. International organizations could establish financial mechanisms to enable developing countries to build environment-compatible public-transport systems on fair financial terms.

F. CONSTRUCTION

Basis for Action

112. Despite the fact that sustained output of the construction industry is vital to the achievement of national socio-economic development goals, including human settlements development goals, construction can contribute to the degradation of the environment, through physical disruption and chemical pollution caused by construction activities. The rapid increase in the volume and complexity of construction, since the early 1950s, and the resource-demanding nature of modern technology have imposed severe stress on the biosphere, through depletion of the natural-resource base, degradation of fragile eco-zones and increases in chemical pollution, underscoring the urgent need for improving construction practices through appropriate policy initiatives and related measures.

Objective

113. The objective of this programme area of action is to satisfy the construction requirements for the development and maintenance of human settlements in a sustainable way by avoiding harmful side-effects on the assimilative and regenerative capacity of the biosphere.

Activities: Adopting a sustainable approach for the construction sector

114. Sustainable development requires the formulation and implementation of a policy framework for the construction sector that effectively addresses the twin requirements of sustainable management of construction resources and control of degradation caused by the adverse impacts of construction. Implementation of this policy framework will call for concerted and complementary action at the national level, in both developed and developing countries, supported by international cooperation.

115. Developing countries could:

(a) formulate a coherent strategy, at the national level, for indigenization of factor-inputs in the construction sector, in order to optimize the exploitation of the natural-resource endowment;

(b) expand technical-support programmes and incentive schemes for improving the production capacity and economic viability of small-scale and informal operatives who can make use of indigenous materials and methods;

(c) promote appropriate standards, specifications and other regulatory measures, with a view to supporting clean, energy-efficient technologies and environmentally-sound utilization of natural resources; and

(d) formulate appropriate land-use policies and introduce planning regulations specially aimed at protection of eco-sensitive zones against physical disruption by construction activities.

116. Industrialized countries could:

(a) promote the development of databases on the embodied energy and environmental effects of building materials as a first step towards creating awareness among users and policy-makers about their significance in the context of sustainable development.

(b) introduce legislation and financial incentives to promote recycling of energy-intensive materials in the construction industry, and conservation of waste energy in building-materials production methods;

(c) introduce regulatory measures, e.g., certification and eco-labelling schemes for the use of such non-renewable natural resources as tropical hardwoods in construction; and

(d) use economic instruments, e.g., product charges, to discourage the use and consumption of construction materials and products which create pollution during their life-cycle.

117. The international community could support national initiatives of developing countries to achieve sustainable development, through:

(a) local capacity building for environment-impact assessment of construction activities;

(b) transfer of low-waste and non-waste technologies and clean technologies for building-materials production;

(c) transfer of appropriate technologies for resource management in construction, particularly, for non-renewable resources; and

(d) promoting multilateral funding to meet environment-protection expenditures, related to human settlements development, that cannot be independently financed by developing countries.

G. HUMAN-RESOURCE DEVELOPMENT AND CAPACITY BUILDING FOR HUMAN SETTLEMENTS DEVELOPMENT

Basis for Action

118. The difficulties faced by the public sector in the developing countries in improving the living conditions of poor in urban and rural areas has led to a concerted search for more effective forms of cooperation among the actors of human settlements development. There is a growing need to encourage sustainable forms of development based on the collaboration between government, the private sector and community organizations. Policy makers responsible for formulating and implementing human settlements strategies must work with communities and their organizations, and establish linkages between physical development, the provision of basic services and community participation. Innovative responses to the capacity building of human resources call for special attention to participatory and gender issues.

Objective

119. The objective is to create the conditions for the improvement of living conditions in low-income communities, through the human-resource development and capacity-building of all actors involved in human settlements development (public-sector, non-government sector, and low-income community residents), with special attention to gender issues.

120. Another objective is to establish a Human-resource Capacity-building Programme aimed at achieving the above objective in as many countries as possible by the year 2000, though technical assistance from UNCHS (Habitat) and other partner agencies with adequate funding from the international donor community.

Activities: Mobilizing human resources

121. Countries could establish a policy environment supportive of participatory forms of partnership between the public, private, and community sectors, which could include:

(a) policy workshops at the national level;

(b) the evaluation of the human-resource development activities of existing institutions, with special reference to poverty and gender issues; and

(c) the identification of gaps and needed additional support.

122. Countries could also improve the managerial, technical, and administrative capacities of public-sector institutions and their officials at national, subnational and local levels, including:

(a) the preparation of training materials especially focused on community development and gender issues;

(b) the dissemination of such materials to public-sector training institutions, accompanied by adequate backstopping in capacity-building; and

(c) the direct training of public-sector officials whose activity impacts on community development.

123. Countries could improve the financial, administrative, and technical capacity of communities in planning, improving and maintaining their settlements, including:

(a) training of community leaders, community development councils and other community-based organizations; and

(b) training of technical and social development staff members of non-governmental organizations (NGOs) involved in low-income housing projects.

124. Multilateral and bilateral donors and executing agencies, such as UNDP, the World Bank and UNCHS (Habitat) could assist developing countries in implementing the above activities.

NOTES

1/ Based on documentation produced by UNDP/World Bank/UNCHS Urban Management Programme.

2/ The "enabling approach": a process in which development efforts are based on constructive partnerships between all actors of development: government, non-governmental (private sector, both formal and informal, non-governmental organizations and institutions, and individual communities). The role of government is redefined as that of a coordinating and facilitating force based on consultation, community participation, accountability, and well-trained and motivated professional cadres.

3/ "People, Settlements, Environment and Development"

4/ United Nations, Population Division

5/ "People, Settlements, Environment and Development"